

Global lessons: developing military trauma care and lessons for civilian practice

T. Woolley^{1,*}, J. A. Round^{2,3} and M. Ingram⁴

¹Academic Department of Military Anaesthesia and Critical Care, Birmingham, UK, ²Queen Elizabeth Barracks, Strensall, York, UK, ³James Cook University Hospital, Middlesbrough, UK and ⁴Army Medical Services Training Centre, York, UK

*Corresponding author. E-mail: tomwoolley@me.com

Abstract

The wars in Iraq and Afghanistan have helped to shape the modern Defence Medical Services. Many lessons were learnt including the need for rapid haemorrhage control, senior decision-making and the evolution of deployed transfusion support. These changes were implemented simultaneously with a coherent, end-to-end medical plan from point of wounding through to rehabilitation. Implementation of the medical plan is harmonious with the NHS trauma pathway, and is key to ensuring effective delivery. Military anaesthetists have a long pre-deployment training pathway starting with a Certificate of Completion of Training (CCT) in anaesthesia and/or critical care, and with an emphasis on military skills related to their specific role. Pre-deployment training includes additional skill training, team training and finally whole hospital collective training. This pathway ensures ongoing and continuing competence on an individual basis, and assurance that hospital management systems and clinical staff can function effectively as a deploying unit.

Key words: military; simulation training; trauma

Hippocrates said that “War is the only proper school for a surgeon”. The medical advances during the recent conflicts in Iraq and Afghanistan have highlighted that the same is true for anaesthesia. In 2011 we showed that casualties were surviving their injuries when they were expected to die,¹ and that year on year over the conflicts, there was an improvement in survival for any given injury severity (Fig. 1).²

It is difficult to determine what specifically these impressive results can be attributed to. It is unlikely to be any one significant factor; rather improvements are likely to be multifactorial and sequential. Figure 2 depicts how, when resources and skills are limited, even small improvements in infrastructure, logistical support and technical skills can make a significant improvement in outcomes. However, in a well-resourced, highly skilled environment such as the military medical efforts in Afghanistan and

Iraq, a cumulative number of small, incremental improvements are required to deliver a substantial effect on outcomes.

Over the course of the conflicts there were a number of incremental innovations and improvements in clinical techniques and attitudes that contributed to the overall effect, and a significant effort in defining, preparing for and implementing a coherent plan for deployed trauma care. In this article we highlight three major clinical lessons and focus on the training and assurance pathway before deployment.

Catastrophic haemorrhage: the ABC paradigm shift

Haemorrhage is the biggest cause of death in military trauma,⁴ and the second biggest cause of death in civilian trauma after

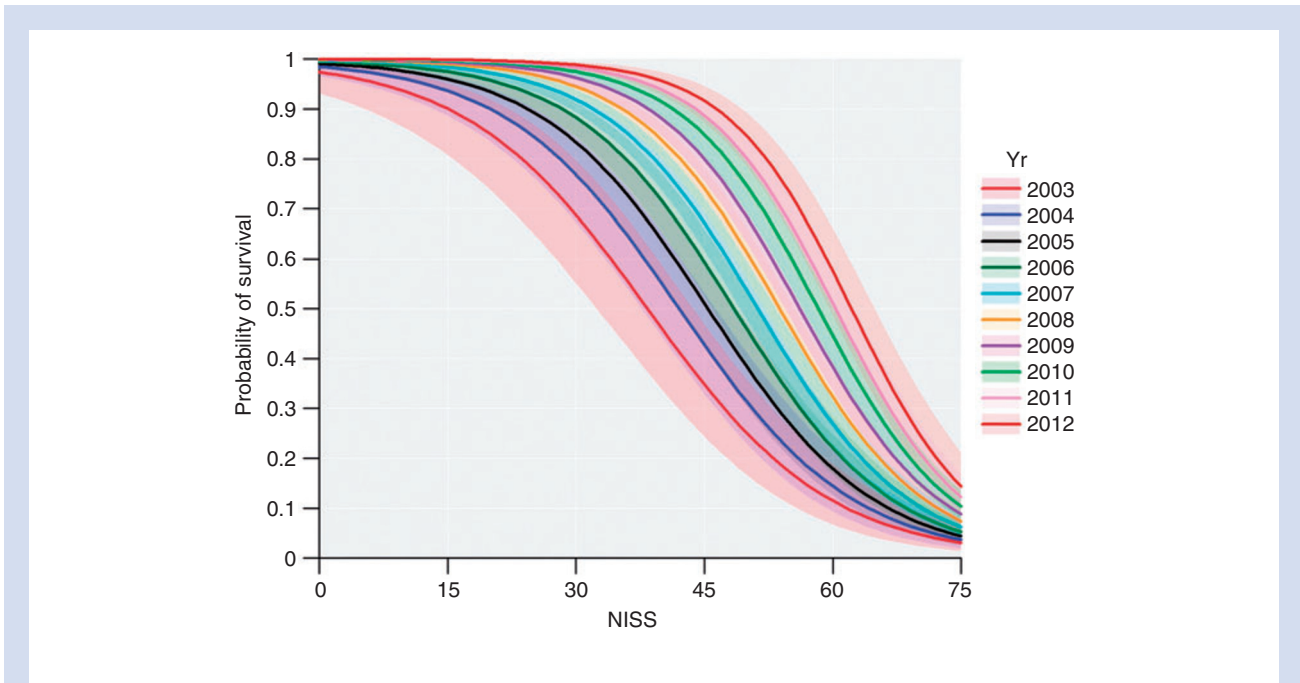


Fig 1 From Penn Barwell et al.² Year on year improvement in predicted probability of survival compared by the New Injury Severity Score. Shaded regions indicate the 95% CIs for the predicted values. Reproduced with permission from reference 2. Copyright Wolters Kluwer Health, Inc.

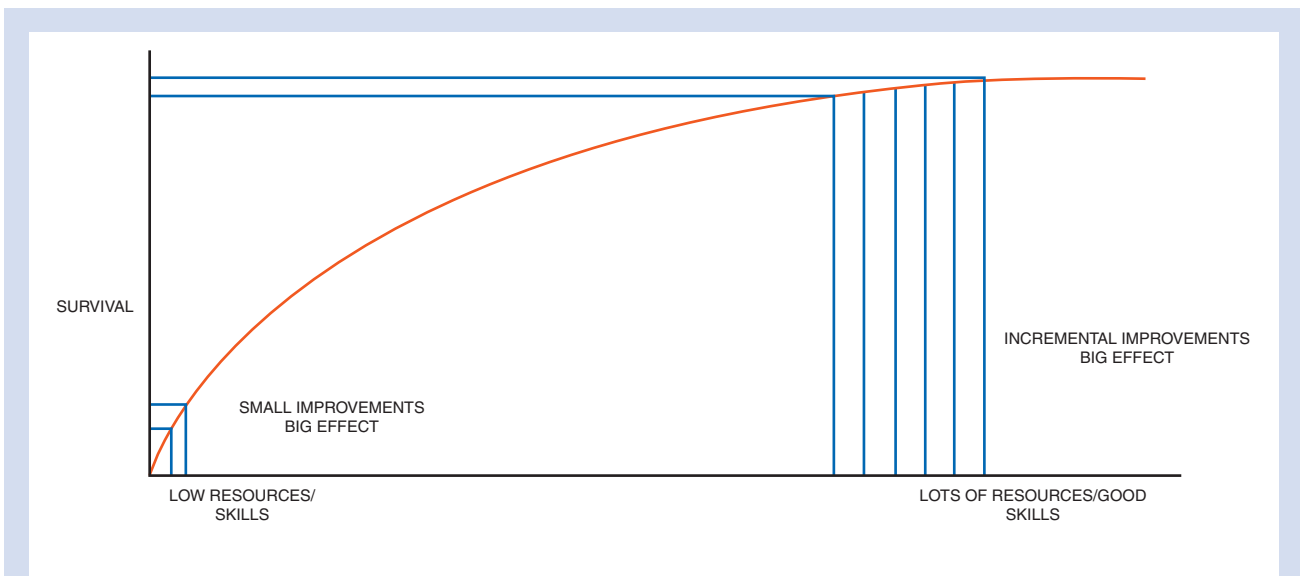


Fig 2 Representation of the effect of improvements in resources and skills on survival in low and well resourced medical treatment facilities. Reproduced with permission from reference 2. Copyright John Wiley and Sons.

head injury.⁵ Death from haemorrhage is potentially survivable, especially if the haemorrhage is from an extremity and therefore amenable to compression.⁶

In 2006 the Defence Medical Services (DMS) evolved the standard ATLS style, sequential ABC approach to trauma, to a more “simultaneous” approach with a focus on stopping

catastrophic haemorrhage as a priority before focusing on the airway.⁷ Pre-hospital use of tourniquets was reintroduced to all military personnel and topical haemostatics issued to frontline medics. Mandatory annual training for all military personnel included battlefield casualty drills focusing on the ABC approach, specifically in stopping compressible haemorrhage

Download English Version:

<https://daneshyari.com/en/article/8930234>

Download Persian Version:

<https://daneshyari.com/article/8930234>

[Daneshyari.com](https://daneshyari.com)